REMARKS

Claim Changes

Claims 1, 12, and 16 are amended to incorporate the subject matter of claim 2; claim 2 is canceled.

Claim 3-5 and 7 are amended to be consistent with claim 1 as amended.

Claims 8-11 have been cancelled without prejudice or disclaimer.

Rejection of Claims 1-4, 7-9, 11-14, and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0147276 (Gholmieh) in view of US 7058028 (Holma)

The Office Action has cited Gholmieh (US 2004/0147276) for a 103(a) rejection of claims 1-4, 7-9, 11-14, and 16-18. The filing date for the cited reference Gholmieh (US 2004/0147276) is December 16, 2003 which is three months after the September 16, 2003 filing date of the application under consideration. Therefore, Applicant understands that the related provisional patent application serial no. 60/433937, filed on December 17, 2002, is the true basis for the rejection. Applicant has reviewed and considered Gholmieh-Provisional (60/433937) as well as Gholmieh (US 2004/0147276) in order to clarify the differences between Gholmieh-Provisional (60/433937) and Gholmieh (US 2004/0147276).

Applicant has amended independent claims 1, 12, and 16 to clarify the invention. In particular, independent claims 1, 12, and 16 have been amended to recite "determining, *by the mobile station*, a communication channel variance condition" and "establishing, *by the mobile station*, a headroom value *based on the communication channel variance condition*." Applicant respectfully submits that the combination of Gholmieh (US 2004/0147276), and Holma does not teach or suggest all the claim limitations as set forth in independent claims 1, 12, and 16, as amended.

Gholmieh is directed towards a method for reducing signaling associated with frequent reporting of power headroom. According to Gholmieh, the radio base station (RBS) receives infrequent periodic full reports from a mobile station that indicates the current power headroom of the mobile station. The RBS tracks changes in the mobile station's headroom over the interval between full reports based on reverse link power control commands sent by it, or based on power control decision feedback from the mobile station. See Gholmieh, Abstract. In one embodiment,

Gholmieh describes *determining* the reverse link transmit power of the mobile station *by the RBS.*

And if the reverse link transmit power of the mobile station is not sufficient for required signal quality, the RBS sends a power control command to the mobile station to increase its reverse link transmit power. In response, the mobile station increments its transmit power and the RBS decrements the headroom by the amount by which the mobile station is assumed to have increased its transmit power. See Gholmieh, para [0025] and [0027]. In another embodiment, the RBS does not adjust the power headroom based on transmitting power control commands. Instead, the mobile station transmits a power control decision feedback to the RBS and the RBS adjusts the power headroom based on receiving the power control decision feedback. Gholmieh's mobile station may send the power control decision feedback at the same rate it receives power control commands. See Gholmieh, para [0029] – [0032]. Gholmieh does not describe or teach any method or condition by which the *mobile station* makes power control decisions. Thus, Gholmieh does not at all show or suggest "determining, by the mobile station, a communication channel variance condition" and "establishing, by the mobile station, a headroom value based on the communication channel variance condition" as recited in Applicant's independent claims 1, 12, and 16.

Holma is directed towards a method for controlling a transmission power of a signal. In Holma, *the base station (BS) determines* a controller variable for the signal and compares the determined controller variable to a target value. If the controller variable is below the target value, the BS asks the mobile station to increase the transmission power. See Holma, Abstract and col. 4 lines 11-37. Thus, Holma also does not show or suggest "determining, *by the mobile station,* a communication channel variance condition" and "establishing, *by the mobile station, a headroom value* based on the communication channel variance condition" as recited by Applicant's independent claims 1, 12, and 16.

Moreover, in one example, Holma's controlled variable is the SIR (signal to interference ratio) of the received signal. The SIR is determined using the pilot symbols in the control channel DPCCH. See Holma, col. 8 lines 56-64. Meanwhile, Applicant claims 1, 12, and 16 recite "the communication channel variance condition is at least one of a primary pilot power variance, fading period and fade depth estimate, or a peak-to-average estimate *within an adaptive measurement interval.*" This limitation is neither shown by Holma nor Gholmieh.

Further, Applicant respectfully submits that Gholmieh and Holma, taken alone or in combination, do not teach or suggest the features as set forth in Applicant's dependent claims. Applicant respectfully disagrees with the statement on page 6, of the Office Action that "Regarding Claims 3, 13 … Gholmieh further teaches wherein the mobile station determines a maximum data rate based on the headroom value (Sections 0010, 0036) and sends the maximum data rate to a base station (Sections 0010, 0036)." Applicant respectfully asserts that this analogy is a mischaracterization of Gholmieh; Gholmieh fails to disclose the above limitation. In Gholmieh the base station uses the stored headroom information to "grant" or "not to grant" higher data rates to the selected mobile stations. See Gholmieh, para [0010] and [0036]. Thus, Gholmieh does not show or suggest "the mobile station determines a maximum data rate based on the headroom value" and "send[ing] the maximum data rate to a base station" as recited in Applicant's dependent claims 3 and 13.

Similarly, Applicant respectfully disagrees with the statement on page 6 of the Office Action that "Regarding Claims 4, 14 … Gholmieh further teaches wherein the mobile station determines a maximum data rate based on the headroom value (Sections 0010, 0036) and sends the maximum data rate to a base station (Section 0010)." Applicant respectfully asserts that this analogy is a mischaracterization of Gholmieh. As explained above, in Gholmieh the base station makes the decision regarding the data rate of the mobile station. Thus, Gholmieh does not show or suggest "the mobile station determines a maximum data rate based on the headroom value" and "send[ing] a rate adjustment request to a base station" as recited in Applicant's dependent claims 4 and 14.

For the above reasons, Applicant submits that independent claims 1, 12, and 16 and dependent claims 3-4 and 13-14 are not obvious in view of the combination of Gholmieh and Holma, and therefore that the rejection of claims 1, 3-4, 12-14, and 16 under 35 USC § 103(a) should be withdrawn.

Dependent claims 2, 8, 9, and 11 are canceled. Dependent claims 7 and 17-18 depend from, and include all the limitations of their respective independent claims 1 and 16. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-4, 7-9, 11-4, and 16-18 under 35 USC § 103(a)in view of Gholmieh and Holma.

Rejection of Claims 5-6, 15, and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0147276 (Gholmieh) in view of US 7058028 (Holma) and further in view of US 6,563,810 (Corazza).

Corazza fails to overcome the deficiencies of Gholmieh and Holma, because Corazza also does not show or suggest "determining, *by the mobile station*, a communication channel variance condition" and "establishing, *by the mobile station*, a headroom value based on the communication channel variance condition" as recited in amended independent claims 1, 12, and 16. Corazza uses a maximum power which is reduced by the headroom power to provide for power control variations. However, for the case of battery-limited condition, Corazza chooses the lesser power denoted by P(R). P(R) is a transmit value selected for reliable transmission and it does not contain any headroom or margin for power control variations. See Corazza, col. 6 lines 30-50. Reconsideration and withdrawal of the rejection of claims 5-6, 15, and 19-20 under 35 U.S.C. 103(a) as being unpatentable over Gholmieh, Holma, and Corazza is respectfully requested.

Rejection of Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0147276 (Gholmieh) in view of US 7058028 (Holma) and further in view of US 2003/0002464 (Rezaiifar)

Claim 10 has been canceled, and withdrawal of the rejection of claim 10 under 35 U.S.C. 103(a) as being unpatentable over Gholmieh, Holma, and Rezaiifar is respectfully requested.

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Such action is earnestly solicited by the Applicant. Should the Examiner have any questions,

comments, or suggestions, the Examiner is invited to contact the Applicant's attorney or agent at the telephone number indicated below.

Please charge any fees that may be due to Deposit Account 502117, Motorola, Inc.

Respectfully submitted,

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